ANALGESIC REQUIREMENTS FOLLOWING SURGERY

by

JOHN E. GALWAY, M.D., F.F.A.R.C.S.,

Senior Registrar Royal Victoria Hospital, Belfast

Now Consultant Anaesthetist, Craigavon Area Hospital, Craigavon, Co. Armagh

THE requirements for postoperative analgesia are very variable and are thought to depend on a multitude of factors which include age, sex, social class, the site and extent of surgery and the immobility or otherwise of the patient (Keats, 1956).

The writer had the opportunity to observe and record the frequency of use of postoperative analgesia in the general surgical recovery ward in a main hospital. During two separate periods (totalling 9 months) a record was maintained of the requirements of 1,611 consecutive surgical patients. This paper presents an analysis of the findings and relates drug needs to the site of operation and the sex of the patient. During the second period of observation the analgesic requirements following endoscopy were also noted.

TABLE

Percentage incidence of patients requiring analgesics in the first four to six hours after operation related to site of surgery and sex of patients

Period	*Treatment*	*No. of patients*	*TYPE OF SURGERY*						
			Abdominal		*Thoracic*	*Cutaneous*	*Anal*	*Limb*	*Diagnostic*
			Upper	*Lower*					
FIRST 3 MONTHS									
Male	Analgesic	114	71	43	85	32	—	18	
	No Analgesic	120							
Female	Analgesic	81	53	50	40	12	—	21	
	No Analgesic	114							
SECOND 6 MONTHS									
Male and Female	Analgesic	517	68	50	74	21	46	—	11
	No Analgesic	665							
Total		1,611							

The incidence of patients requiring postoperative analgesia can be seen in the Table in which the results for the two separate periods of observation have been analysed independently. In both groups the overall percentage of patients requiring analgesics was between 43 and 44 per cent. This was significantly more frequent

in the upper abdominal series than in those patients having lower abdominal surgery ($\chi^2=16.02$; $P<0.0005$). Thoracic surgery was followed by the highest incidence of the need of analgesics, 74 per cent in the present study. On the whole women had a lower requirement for analgesics than men except after lower abdominal and limb surgery. The difference between male and female analgesic requirements for combined upper and lower abdominal surgery groups just failed to reach significant levels ($\chi^2=3.28$; $0.1>P>0.05$). When this comparison was possible, female patients showed an almost identical analgesic need following upper and lower abdominal surgery. During the period of study male patients had a significantly greater requirement for analgesia following upper abdominal ($\chi^2=10.89$; $P<0.001$) and thoracic surgery ($\chi^2=8.32$; $P<0.005$) than females.

Analgesic requirements were similar after upper abdominal and thoracic operations but in both incidences they were greater than after lower abdominal surgery ($\chi^2=16.91$; $P<0.0005$). Similarly patients who had undergone either abdominal or thoracic surgery had a significantly greater requirement for analgesia than patients who had undergone only superficial operations to the limb or body wall.

Discussion

The findings of the present study are very similar to those of Loan & Dundee (1969) which were carried out five years previously in the same recovery ward. They also confirm those of Swerdlow, Starmer and Daw (1964) who found a greater requirement for postoperative analgesia after upper as compared with lower abdominal operations. Many women maintain that they can suffer pain better than their men folk. In the light of the present study there may well be justification for their view, at least when the pain is very severe.

Two final features of this study were that anal surgery required much less pain relief from opiates than the writer would have believed. He later found out that some of his surgical colleagues were infiltrating the operation site with local anaesthetic solutions! Normally one does not consider that cystoscopy, gastroscopy, sigmoidoscopy and other diagnostic procedures are painful. It is of interest to learn that over 11 per cent of these patients asked for an opiate to relieve postoperative discomfort.

Summary

In a large series of patients the writer confirmed that upper abdominal and thoracic procedures were more painful than lower abdominal and cutaneous surgery. Male patients were less tolerant of severe pain than were females.

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